MANUFACTURING EMPLOYMENT *(Unadjusted)* MAY	(In Thousands) Latest Month	Month Ago	Year Ago
All Manufacturing (Including Canning)	513.6	511.3	508.3
All Manufacturing (Excluding Canning)	505.0	503.2	499.7
Durable Goods	313.2	312.9	311.1
Lumber and Wood Prod., (Except Furniture)	24.9	24.5	23.1
Sawmills and Planning Mills	3.2	3.1	3.1
Millwork, Veneer, Plywood & Prefab. Wood Prod.	12.8	12.4	11.4
Furniture and Fixtures	11.1	11.1	10.3
Household Furniture	4.8	4.7	4.6
Stone, Clay and Glass Products	8.9	8.6	8.2
Concrete, Gypsum and Plaster Products	4.6	4.3	4.0
Primary Metal Industries	18.4	18.7	19.1
Iron and Steel Foundries	9.5	9.6	9.7
Fabricated Metal Products	50.5	50.5	51.7
Heating Equipment (Except Electrical) & Plumbing Fixtures	7.1	6.9	6.3
Fabricated Structural Metal Products	11.9	12.0	12.7
Metal Stampings	10.3	10.4	10.6
Machinery (Except Electrical)	99.2	99.4	98.9
Engines and Turbines	19.9	20.0	18.3
Farm Machinery and Equipment	11.9	12.0	12.1
Const., Min. & Material Handling Mach. & Equip.	11.2	11.2	11.2
Metalworking Machinery and Equipment	10.7	10.7	10.9
Special Industry Machinery (Except Metalworking)	11.7	11.6	12.3
General Industrial Machinery and Equipment	13.7	13.7	13.8
Service Industry Machines	6.8	6.7	7.1
Electrical Machinery, Equipment and Supplies	47.2	47.1	48.1
Electrical Industrial Apparatus	15.2	15.1	16.2
Household Appliances	6.2	6.1	6.2
Transportation Equipment	33.0	33.1	31.3
Motor Vehicles and Equipment	25.8	25.8	23.8
Instruments and Related Products	10.6	10.7	11.4
Miscellaneous Manufacturing	9.4	9.2	9.1
Nondurable Goods	200.4	198.5	197.1
Food and Kindred Products	58.3	57.3	58.0
Meat Products	13.1	13.0	13.9
Dairy Products	17.6	17.2	17.1
Canning and Preserving	8.6	8.1	8.6
Bakery Products	5.1	4.9	4.4
Beverage Industries	7.2	7.3	7.4
Textile Mill Products	3.7	3.6	3.9
Knitting Mills	3.2	3.0	3.4
Apparel and Other Finished Products	6.8	6.7	6.3
Paper and Allied Products	49.4	49.0	48.6
Pulp and Paper Mills	30.8	30.5	30.2
Converted Paper and Paperboard Products	10.1	10.2	10.1
Paperboard Containers and Boxes	7.2	7.1	7.0
Printing, Publishing and Allied Industries	40.2	40.1	39.5
Newspapers	12.4	12.3	12.1
Commercial Printing	17.1	17.0	17.1
Chemicals and Allied Products	11.2	11.0	10.5
Rubber and Misc. Plastics Products	23.9	24.1	23.0
Miscellaneous Plastics Products	19.7	19.8	18.6
Leather and Leather Products	6.6	6.5	7.2
Leather Tanning and Finishing	1.7	1.7	1.7
Footwear (Except Rubber)	3.1	3.1	3.6
Other Nondurable Goods	-	-	-

Section

C WISCONSIN EARNINGS AND HOURS DATA

EARNINGS AND HOURS *(Unadjusted)* MAY	Average Weekly Earnings			Average Weekly Hours		
	Latest Month	Mo. Ago	Yr. Ago	Latest Month	Mo. Ago	Yr. Ago
All Manufacturing (Incl. Canning)	$432	$427	$426	40.9	40.4	41.1
All Manufacturing (Excl. Canning)	434	429	428	40.9	40.4	41.1
Durable Goods	437	429	431	41.2	40.4	41.1
Lumber/Wood Prod. (Exc. Furn.)	328	320	322	41.4	40.6	39.7
Furniture and Fixtures	340	334	322	42.4	41.6	41.3
Stone, Clay and Glass Products	430	406	406	45.9	44.2	42.7
Primary Metal Industries	431	429	418	42.1	42.6	42.2
Iron and Steel Foundries	432	440	422	42.3	44.0	42.8
Fabricated Metal Products	411	402	412	40.1	38.7	40.1
Fab. Structural Metal Prod.	429	420	426	43.2	42.5	41.4
Metal Stampings	442	433	429	39.0	37.9	39.3
Machinery (Except Electrical)	486	487	478	41.9	41.5	41.7
Engines and Turbines	538	579	516	41.4	42.7	40.5
Farm Machinery and Equip.	530	520	526	41.9	40.7	41.6
Const. and Related Mach.	456	443	456	42.0	40.4	41.9
Metalworking Mach. and Equip.	514	493	515	42.2	41.0	42.9
Spec. Ind. Mach. (Exc. Metal).	481	467	494	41.6	40.8	42.5
Gen. Industrial Mach. and Equip.	481	475	507	41.2	41.0	42.7
Electrical Mach., Equip. and Supp.	408	393	407	40.0	38.9	40.7
Electrical Industrial Apparatus	447	436	417	40.9	40.6	39.3
Transportation Equipment	548	534	547	40.1	39.4	41.0
Instruments and Related Prod.	365	350	371	40.5	39.1	41.0
Nondurable Goods	424	422	420	40.4	40.3	41.2
Food and Kindred Products	394	386	394	39.8	39.1	40.4
Meat Products	364	347	349	40.1	39.5	39.5
Dairy Products	401	391	399	40.5	39.9	40.4
Textile Mill Products	299	299	322	39.6	39.4	41.4
Apparel and Other Fin. Prod.	243	234	241	37.9	36.6	39.2
Paper and Allied Products	555	570	543	43.8	45.0	44.8
Pulp and Paper Mills	604	630	595	44.8	47.0	46.0
Printing, Pub. and Allied Prod.	435	422	438	38.0	37.5	39.3
Chemicals and Allied Products	482	480	474	41.7	41.2	41.4
Rubber and Misc. Plastics Prod.	330	327	326	39.7	39.4	39.9
Leather and Leather Products.	259	255	253	38.0	37.6	37.9

Section

C WISCONSIN EARNINGS AND HOURS DATA

EARNINGS AND HOURS *(Unadjusted)* MAY	Average Hourly Earnings Including O.T.			Average Hourly Earnings Excluding O.T.		
	Latest Month	Mo. Ago	Yr. Ago	Latest Month	Mo. Ago	Yr. Ago
All Manufacturing (Incl. Canning)	$10.56	$10.57	$10.37	$10.14	$10.15	$10.00
All Manufacturing (Excl. Canning)	10.60	10.61	10.41	10.18	10.19	10.04
Durable Goods	10.60	10.63	10.49	10.27	10.32	10.21
Lumber/Wood Prod. (Exc. Furn.)	7.92	7.89	8.11	7.89	-	-
Furniture and Fixtures	8.03	8.04	7.80	7.72	7.78	7.54
Stone, Clay and Glass Products	9.36	9.18	9.51	9.01	8.89	-
Primary Metal Industries	10.23	10.08	9.91	9.81	9.70	9.51
Iron and Steel Foundries	10.21	10.00	9.87	9.73	9.59	9.55
Fabricated Metal Products	10.26	10.40	10.28	9.90	10.04	9.94
Fab. Structural Metal Prod.	9.92	9.89	10.29	9.48	9.48	9.96
Metal Stampings	11.33	11.43	10.91	11.04	11.18	10.60
Machinery (Except Electrical)	11.60	11.73	11.47	11.14	11.24	11.05
Engines and Turbines	12.99	13.55	12.74	12.32	12.60	12.15
Farm Machinery and Equip.	12.66	12.78	12.64	12.17	12.40	12.27
Const. and Related Mach.	10.85	10.96	10.88	10.53	10.72	10.63
Metalworking Mach. and Equip.	12.18	12.03	12.00	11.79	11.80	11.55
Spec. Ind. Mach. (Exc. Metal).	11.56	11.45	11.63	11.12	11.07	11.17
Gen. Industrial Mach. and Equip.	11.67	11.59	11.87	11.33	11.30	11.26
Electrical Mach., Equip. and Supp.	10.20	10.10	10.01	9.91	9.88	9.72
Electrical Industrial Apparatus	10.94	10.75	10.60	10.82	-	10.39
Transportation Equipment	13.66	13.55	13.33	13.29	13.28	12.92
Instruments and Related Prod.	9.00	8.95	9.04	8.78	8.80	8.82
Nondurable Goods	10.50	10.48	10.19	9.93	9.88	9.66
Food and Kindred Products	9.91	9.88	9.76	9.40	9.40	9.25
Meat Products	9.07	8.78	8.84	8.70	8.49	8.53
Dairy Products	9.89	9.81	9.88	9.39	9.33	9.42
Textile Mill Products	7.55	7.60	7.77	7.29	7.48	7.53
Apparel and Other Fin. Prod.	6.40	6.40	6.16	6.28	6.36	6.04
Paper and Allied Products	12.68	12.67	12.11	11.90	11.76	11.53
Pulp and Paper Mills	13.48	13.41	12.93	12.57	12.35	12.33
Printing, Pub. and Allied Prod.	11.44	11.25	11.15	-	-	-
Chemicals and Allied Products	11.56	11.65	11.45	11.24	11.41	11.09
Rubber and Misc. Plastics Prod.	8.32	8.29	8.17	8.00	8.01	7.86
Leather and Leather Products.	6.81	6.78	6.68	6.56	6.59	6.51

Section

C SUMMARY OF RECENT WISCONSIN DATA

EARNINGS AND HOURS, MFG. Production Workers *(Unadjusted)*	Average Weekly Earnings			Average Weekly Hours			Average Hourly Earnings Including O.T.			Average Hourly Earnings Excluding O.T.	
	Latest Month	Month Ago	Year Ago	Latest Month	Month Ago	Year Ago	Latest Month	Month Ago	Year Ago	Latest Month	Month Ago
United States	$403	$399	$395	40.9	40.4	40.6	9.86	9.87	9.72	-	-
Wisconsin	432	427	426	40.9	40.4	41.1	10.56	10.57	10.37	10.14	10.15
Selected Areas											
Appleton-Oshkosh (Calumet-Winnebago-Outagamie)	465	454	436	42.8	42.6	42.3	10.87	10.66	10.31	10.34	10.24
Beloit (City)	396	382	378	38.3	37.7	39.0	10.35	10.13	9.68	-	-
Eau Claire (Eau Claire-Chippewa)	427	433	421	40.1	39.1	40.5	10.64	11.07	10.39	10.06	10.38
Fond du Lac (County)	398	364	405	40.9	37.5	42.4	9.72	9.70	9.54	9.33	9.42
Green Bay (Brown County)	479	473	467	41.8	41.7	41.5	11.45	11.34	11.25	10.62	10.54
Janesville (City)	536	525	501	38.5	38.4	37.9	13.92	13.68	13.21	13.76	-
Janesville-Beloit (Rock County)	471	463	457	39.2	38.0	38.6	12.32	12.18	11.83	12.04	12.05
Kenosha (County)	466	466	440	39.1	38.9	39.9	11.92	11.99	11.03	11.51	11.58
La Crosse (County)	370	357	367	39.6	39.0	38.7	9.35	9.16	9.49	9.03	8.89
Madison (Dane County)	402	404	424	40.1	40.5	41.9	10.02	9.98	10.13	9.65	9.58
Manitowoc (County)	388	394	393	39.7	38.9	40.9	10.06	10.14	9.60	9.78	9.89
Milwaukee (Milwaukee-Ozaukee-Waukesha-Washington)	475	470	474	40.9	40.2	41.0	11.61	11.68	11.56	11.13	11.19
Racine (County)	455	438	441	40.4	39.6	40.2	11.26	11.05	10.98	11.00	10.93
Sheboygan (County)	394	388	382	40.5	40.2	39.7	9.74	9.66	9.62	9.32	9.26
Wausau (Marathon County)	411	408	396	41.7	41.7	41.0	9.85	9.79	9.67	9.39	9.38

EMPLOYMENT, MFG. *(Unadjusted)*	(In Thousands)			Percent Change	
	Latest Month	Month Ago	Year Ago	Month Ago	Year Ago
United States	18,983.0	19,924.0	18,981.0	0.3	0.0
Wisconsin	513.6	511.3	508.3	0.4	1.0
Selected Areas					
Appleton-Oshkosh (Calumet-Winnebago-Outagamie)	49.1	48.3	49.0	1.7	0.2
Beloit (City)	4.6	4.6	5.0	0.0	- 8.0
Eau Claire (Eau Claire-Chippewa)	10.3	10.2	10.0	1.0	3.0
Fond du Lac (County)	10.1	10.2	9.9	-1.0	2.0
Green Bay (Brown County)	23.6	23.5	24.1	0.4	- 2.1
Janesville (City)	10.0	9.8	10.7	2.0	- 6.5
Janesville-Beloit (Rock County)	16.8	16.4	17.6	2.4	- 4.5
Kenosha (County)	13.2	12.9	10.9	2.3	21.1
La Crosse (County)	10.1	10.2	10.3	-1.0	- 1.9
Madison (Dane County)	22.0	21.6	20.6	1.9	6.8
Manitowoc (County)	10.8	10.8	12.0	0.0	-10.0
Milwaukee (Milwaukee-Ozaukee-Waukesha-Washington)	165.7	166.2	166.9	-0.3	- 0.7
Racine (County)	23.9	24.1	24.4	-1.7	- 2.9
Sheboygan (County)	18.9	19.1	18.5	-1.0	2.2
Wausau (Marathon County)	12.6	12.5	11.8	0.8	6.8

HOW INDICATORS DISCLOSE BUSINESS CONDITIONS

by Joseph Tumpach, Jr.

"Wolf, wolf!" cries the economist. But few seriously listen because so many have been lulled by so long of an economic expansion. Indeed, our current business activity level has been increasing...not always strongly spurting, but increasing... for nearly four years. And in that time, every now and then, an economic observer voiced a warning of pending recession. Up to now, our disregarding those sporadic warnings has been justified. Yet, what signals among the welter of economic activity prompted those warnings?

Business activity does vary in a cycle of expansion and contraction because our largely capitalistic economy is governed by supply and demand forces, which vary in time. But business activity throughout the economy is not synchronized. Some types of activity increase or decrease before the majority and, thus, can be singled-out as leading indicators of the general economic activity level.

have the economic indicators that economists rely on to predict the expansion and contraction phases of the business cycle become passe? Furthermore, have government anti-recession policies and scientific business management techniques rendered the business cycle a thing of the past?

Limited production capacity, it is generally agreed, is the constraining factor to economic growth, the factor that precipitates recession. An accelerating engine that needs more fuel, a growing economy needs more and more production capacity; needs more machinery, more factories, more labor. And, like an engine which has a built-in limit on fuel consumed, the amount of production facilities limit the economy from boundless expansion.

True, new production equipment can be built, but that takes time and is costly. Surveys of capital expenditure plans, in fact, are good indicators of confidence or reluctance and of probable economic expansion or recession. Managers need assurances of continued business expansion before expending time and money in new equipment.

The other factor of production, labor, is much more variable. Employers can hire more workers, add second and third shifts in a factory, and schedule overtime. But even the labor input of production has limits. Workers with needed skills simply may not be available. Training new workers is time-consuming and expensive.

Labor usage, nevertheless, does vary, and thus, provides an indicator of economic activity. The advantage of labor utilization as economic indicators is the timeliness and comprehensiveness of labor statistics. Employment levels are available monthly or quarterly for all major industries and for the nation, states and some local areas. The labor input equation, however, involves both the number employed and the time spent on the job. A workforce averaging forty-one hours per week produces more than a workforce of the same size that is averaging thirty-nine hours per week. And, an overtime average of four hours per week signals a more vibrant economy than an overtime average of two hours per week.

Thorough statistics on the average production workweek in manufacturing

industries are gathered and published through a joint state and federal employer survey program. Average weekly earnings and employment levels for production workers is collected on the same survey and published. As an indicator of economic health in manufacturing, all three--the length of the workweek, average earnings, and employment levels--should be viewed in conjunction and interpreted.

With the onset of a recession, for example, the average workweek may grow longer and average employee earnings may increase while employment levels decline. That is because employers who need to trim their labor force will normally layoff less experienced and, thus, less well paid workers and, at the same time, will slightly increase work hours to adjust for a smaller core of workers. Conversely, during economic recovery, the average workweek may get shorter as employers feel confident enough to rehire or to hire new workers, which decreases the average earnings but, of course, increases employment levels. The best economic conditions result in growth of all three--the average workweek, average earnings, and the employment levels.

Our most complete statistics are garnered and kept for manufacturing industries. But, how relevant are those figures in an economy which grows in the service, trade, and other sectors? True, service and trade industry growth have outpaced manufacturing, at least in employment growth. However, dissimilar business activities within a complex economy are chained together. The service and trade economies are dependent on manufacturing, just as manufacturing is dependent on them. Much of the service sector employment growth, for example, has come in the business service sector, a sector that provides not personal services, but services such as accounting, engineering design, and business planning to other business, including manufacturing. Service industry companies have absorbed many operations formerly performed in manufacturing companies. Thus, indicators of labor utilization within manufacturing can signal a healthy economy even though manufacturing employment is not rapidly growing.

Not all types of industry behave the same at any particular point of the business cycle. Some industries, repair services for instance, prosper during a recessionary phase while other industries are in a slump. A recession occurs when the business activity of the majority of industries declines, so, it is the aggregate or net level of business that determines the economic cycle phase.

Some industries enter a recession later than others. Generally, those businesses whose product requires lengthy planning, design, engineering and production time will lag the general economic activity level. Recessionary impact on them is delayed. That is because those industries' business is characterized by long-term orders for their products. Conversely, the trade industry economy can fluctuate immediately with consumer demand. Indeed, some observers suggest that a shift of our industry mix away from a manufacturing dominated economy to a more heterogeneous industry mix will lessen the impact of the business cycle. That, along with anti-recession measures such as unemployment compensation, federal monetary and fiscal responsibility, and equitable international trade agreements, they claim, could ensure constant economic expansion.

Others proclaim that recessions are precipitated by man-made economic cataclysms, such as oil embargoes which cannot be anticipated or controlled. There is probably an element of truth in both arguments. But we still haven't confirmed the effect of anti-cyclical policies or of large-scale economic shifts on business cycle timing or on the severity of recessions. Both consumers and business leaders adjust their economic activity to economic conditions.

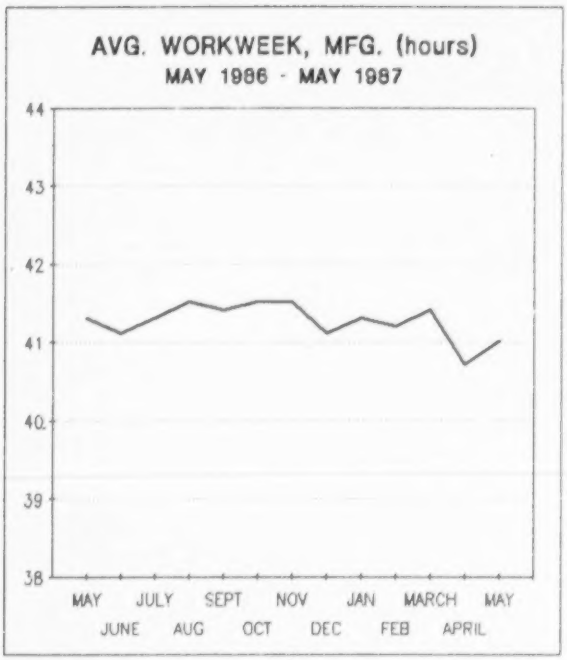
We do know that consumers drive about two-thirds of our economy, that two-thirds of our business activity is directed at selling a final product or service directly to consumers. Variance in consumer activity ripples throughout the economy. We have measures of personal income as indicators of consumption ability throughout the state; we have measures of nation-wide consumer debt burdens and measures of personal savings rates. And, even with the trend to multiple-worker families, unemployment does change consumption patterns. The changing composition of the labor force may soften the impact of recession, but does not stop a recession. Recessions and recoveries begin or are forestalled at the smallest unit of economic activity--the consumer.

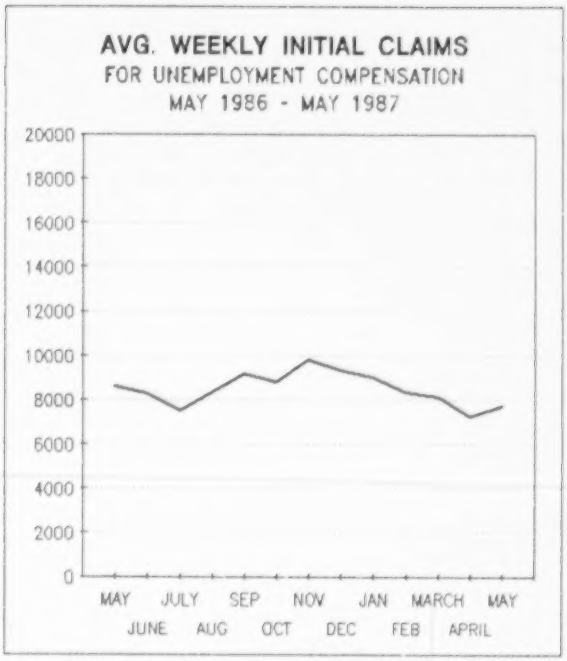
What is the value of state, or even local, economic indicators if our economic activity is so intertwined, if we are becoming global traders, if state and local economics mirror national economic conditions? There are local, state, and even regional differences in economic activity. States along the east and west coasts, for example, remarkably outperformed middle-America in recovering from our last recession. Population and service-industry employment figures denote the cause of the coastal success... their industry is more oriented toward service industries which thrive in more populated regions. Thus, state and local indicators, which can consist of merely population and employment data, enables economists to keep tabs on such state and local growth differences. ▩

Section

D

CYCLICAL INDICATORS





Section

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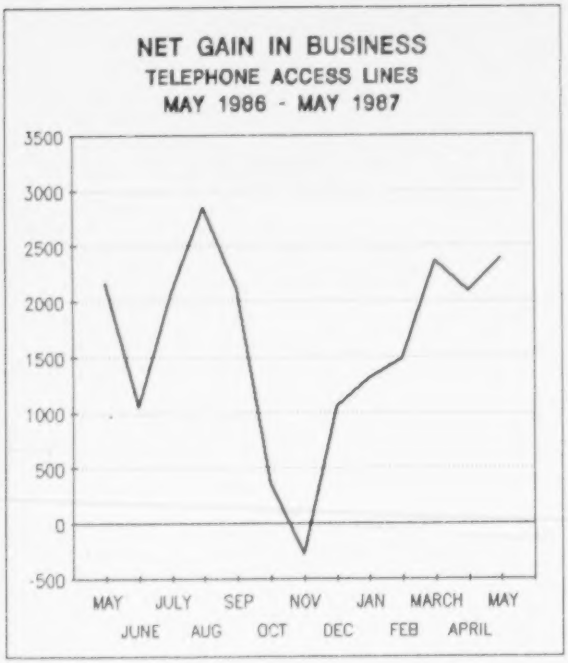
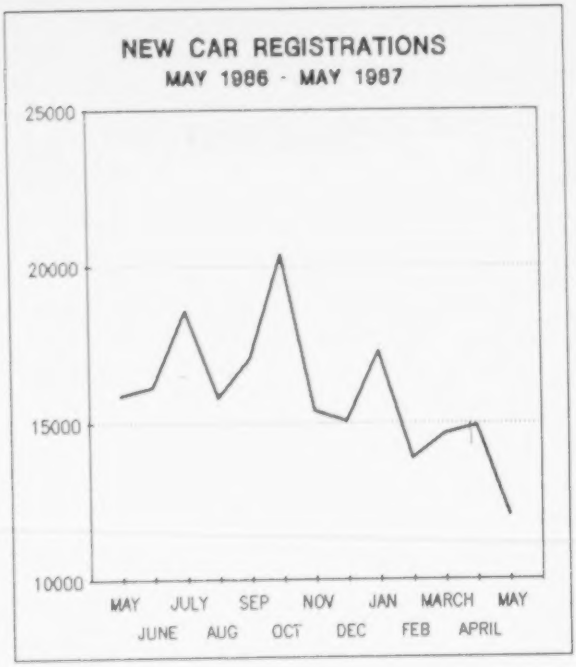
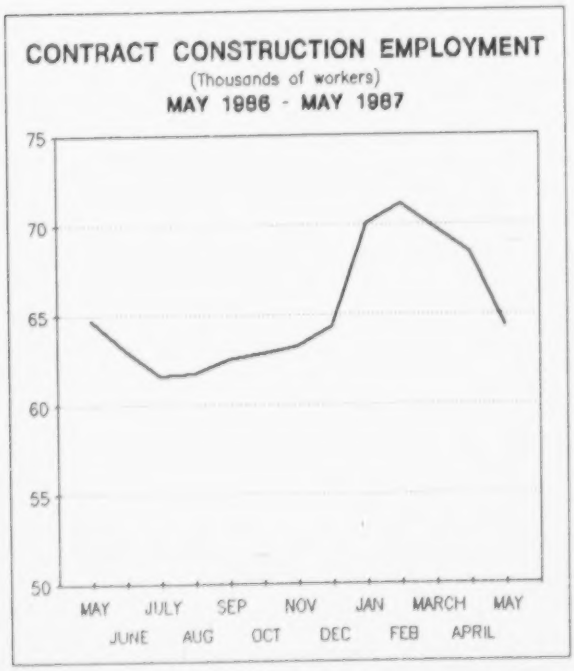
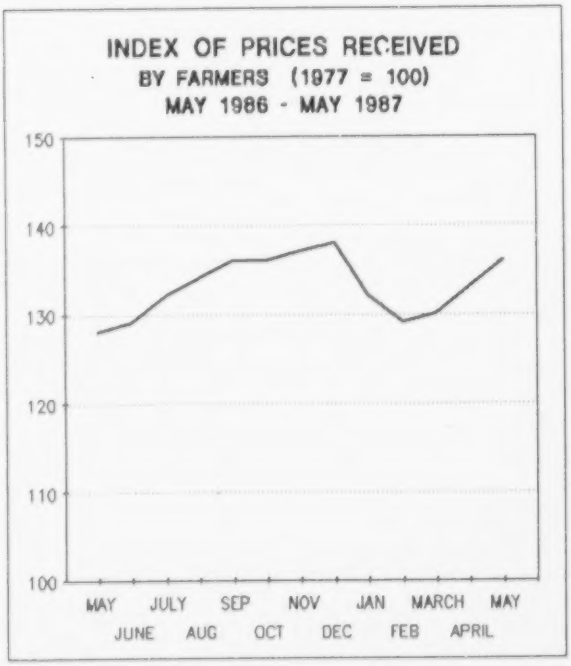
CYCLICAL INDICATORS









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